INDEX OF AUTHORS' NAMES.

TRANSACTIONS. 1894.

And also to such papers as appeared in the Proceedings during the Session 1893—1894 (Nos. 128—141; November, 1893, to July, 1894), but not in Transactions (marked PROC.).

A.

Allhusen, F. E. See S. Ruhemann.
Armstrong, H. E., presidential address, 336.
—— the action of bromine on azobenzene—a correction, PROC., **1893**, 206.
—— the origin of colour. X. Coloured hydrocarbons, PROC., **1893**, 206.
Armstrong, H. E., and A. Lapworth, the interaction of acid chlorides and nitrates, PROC., **1893**, 255.
Arnold, J. O., and A. A. Read, the chemical relations of carbon and iron, 788.
Aston, Miss E., and W. Ramsay, the molecular formulæ of some liquids as determined by their molecular surface energy, 167.

B.

Bailey, G. H., stability of the oxides considered in relation to the periodic law, 315.
—— volatilisation of salts during evaporation, 445.
Baker, H. B., influence of moisture on chemical change, 611.
Bicket, J. H., obituary notice of, 382.
Bossi, A. L. See W. R. Dunstan.
Boyd, D. R., reduction of paratoluene-azodimethylaniline, 879.
Brauner, B., fluoroplumbates and free fluorine, 393.
Brown, A. J., the specific character of the fermentative functions of yeast cells, 911.
Brown, J. T., obituary notice of, 382.
Burch, G. J., and J. W. Dodgson, the action of concentrated acids on certain metals when in contact with each other, PROC., **1894**, 84.

C.

Carnell, W. C. See S. C. Hooker.
Carr, F. H. See W. R. Dunstan.
Cavallo, W. See J. J. Hummel.
Chattaway, F. D., preparation of β-chloronaphthalene, 875.
—— note on β-mercurydinaphthyl and ββ-dinaphthyl, 877.
Chattaway, F. D., and W. H. Lewis, phenylnaphthalene. Part II. β-Phenylnaphthalene, 869.
Clarke, F. C. H., obituary notice of, 383.
Collie, J. N., a new method of producing carbon tetrabromide, 262.
Collie, J. N., and H. R. Le Sueur, salts of dehydracetic acid, 254.
Cook, E. H., effect of heat on iodates and bromates. Part I. Potassic iodate and bromate, 802.
Cope, F. See A. G. Perkin.
Crossley, A. W., and W. H. Perkin, jun., substituted pimelic acids, 987.
—— —— the products of the action of fused potash on camphoric acid, PROC., **1894**, 65.

D.

Davidson, W. B. See F. R. Japp.
Davies, R. H., obituary notice of, 384.
Deeley, R. M., the oxides and the periodic law, 106.
Dent, F. See A. Smithells.
Dewar, J., note on the viscosity of solids, PROC., **1894**, 136.
Divers, E., and T. Haga, oximidosulphonates or sulphazotates, 523.
Dobbie, J. J., and A. Lauder, corydaline. Part III. Oxidation with potassium permanganate, 57.
Dodgson, J. W. See G. J. Burch.

Dougal, Mrs. M. D., a specimen of early Scottish iron, 744.
Dunstan, W. R., and A. L. Bossi, formaldoxime, Proc., **1894**, 55.
Dunstan, W. R., and F. H. Carr, contributions to our knowledge of the aconite alkaloïds. Part IX. The effect of heat on aconitine and some of its derivatives. Formation of pyraconitine, 176.
—— —— contributions to our knowledge of the aconite alkaloïds. Part X. Further observations on the conversion of aconitine into isaconitine and on the hydrolysis of aconitine, 290.
Dunstan, W. R., and T. S. Dymond, the isomerism of the paraffinic aldoximes, 206.
—— —— the reduction products of nitro-compounds, Proc., **1894**, 139.
Dunstan, W. R., and E. Goulding, the action of methylic iodide on hydroxylamine, Proc., **1894**, 138.
Dunstan, W. R., and E. F. Harrison, contributions to our knowledge of the aconite alkaloïds. Part VIII. On picraconitine, 174.
Dunstan, W. R., and H. A. D. Jowett, the action of iodine and of methylic iodide on aconitine, Proc., **1894**, 96.
Dunstan, W. R., and C. M. Luxmore, the properties of α-benzaldoxime and some of its derivatives, Proc., **1893**, 253.
Dyer, B., on the analytical determination of probably available "mineral" plant food in soils. (Illustrated by examination of the permanent barley soil of Hoos Field, Rothamstead), 115.
Dymond, T. S. See W. R. Dunstan.
Dyson, G., and A. Harden, on the combination of chlorine with carbon monoxide under the influence of light, Proc., **1894**, 165.

E.

Easterfield, T. H., and W. J. Sell, studies on citrazinic acid. Part II, 28.
Easterfield, T. H. See also W. J. Sell.

F.

Fenton, H. J. H., the oxidation of tartaric acid in presence of iron, 899.
Forster, M. O. See W. A. Tilden.
Foster, W., obituary notice of, 385.
Frankland, P. F., and J. Macgregor, the maximum molecular deviation in the series of the ethereal salts of active diacetylglyceric acid, 750.
—— —— observations on the influence of temperature on the optical activity of organic liquids, 760.

G.

Gale, S., obituary notice of, 386.
Gardner, J. A. See J. E. Marsh.
Goodwin, W., and W. H. Perkin, jun., β-2-dimethylglutaric acid, Proc., **1894**, 64.
Goulding, E. See W. R. Dunstan.

H.

Haga, T. See E. Divers.
Hanes, E. S. See R. Meldola.
Hannay, J. B., new volatile compounds of lead sulphide, Proc., **1894**, 113.
—— the interaction of sulphide with oxide of lead, Proc., **1894**, 151.
Harden, A. See G. Dyson.
Harrison, E. F. See W. R. Dunstan.
Haworth, E., and W. H. Perkin, jun., synthesis of pentamethylenecarboxylic acid, hexamethylenecarboxylic acid (hexahydrobenzoïc acid), and azelaic acid, 86.
—— —— hexamethylene dibromide and its action on sodium and on ethylic sodiomalonate, 591.
—— —— 1 : 2-pentamethylenedicarboxylic acid, 978.
Heaton, C. W., obituary notice of, 386.
Heycock, C. T., and F. H. Neville, freezing points of alloys in which the solvent is thallium, 31.
—— —— the freezing points of triple alloys, 65.
Holt, W., and W. E. Sims, oxidation of the alkali metals, 432.
Hooker, S. C., preparation and properties of bromolapachol, 15.
—— the synthesis of lapachol, Proc., **1893**, 259.
Hooker, S. C., and W. C. Carnell, conversion of ortho- into para- and of para- into ortho-quinone derivatives, and the condensation of aldehydes with β-hydroxy-α-naphthaquinone, 76.

Hooker, S. C., and J. G. Walsh, jun., conversion of ortho- into para- and of para- into ortho-quinone derivatives. II. Dinaphthyldiquinone, 321.
Hooker, S. C., and E. Wilson, conversion of ortho- into para- and of para- into ortho-quinone derivatives. Part III. The hydroximes of the lapachol-group, 717.
Hummel, J. J., and W. Cavallo, the colouring matter of the Indian dye-stuff Tesu, Proc., **1894**, 11.
Hummel, J. J. See also A. G. Perkin.

J.

Jackson, D. H., note on hyponitrites, Proc., **1893**, 210.
Jackson, H., observations on the nature of fluorescence, 734.
Japp, F. R., and W. B. Davidson, interaction of benzil and benzylamine in presence of zinc chloride, Proc., **1894**, 49.
Japp, F. R., and T. S. Murray, preparation of 2′ : 3′-diphenylindoles from benzoïn and primary benzenoïd amines, 889.
Jones, H. C., the results of measurements of the freezing points of dilute solutions, Proc., **1894**, 101.
Jowett, H. A. D. See W. R. Dunstan.

K.

Kingzett, C. T., the aërial oxidation of terpenes and essential oils, Proc., **1894**, 51.
Kipping, F. S., the formation of the hydrocarbon "truxene" from phenylpropionic acid and from hydrindone, 269.
—— α-hydrindone and its derivatives. Part I, 480.
—— the action of aluminium on heptylic chloride, Proc., **1893**, 208; 1894, 60.
—— the conversion of α-hydrindonoxime into hydrocarbostyril, Proc., **1893**, 240.
Kipping, F. S., and W. J. Pope, the preparation of sulphonic derivatives of camphor, Proc., **1894**, 163.
—— —— dextrorotatory camphor sulphonic chloride, Proc., **1894**, 164.

L.

Lapworth, A. See H. E. Armstrong.
Lauder, A. See J. J. Dobbie.
Laurie, A. P., the E.M.F. of alloys in a voltaic cell, 1030.
Lean, B., homologues of butanetetracarboxylic acid and of adipic acid, 995.
—— notes on the affinities of polybasic acids, 1024.
Leibius, A., obituary notice of, 388.
Leicester, J., the interaction of quinones with metanitraniline and nitroparatoluidine, Proc., **1893**, 215.
Le Sueur, H. R. See J. N. Collie.
Lewis, W. H. See F. D. Chattaway.
Linder, S. E., and H. Picton, solution and pseudo-solution, Proc., **1894**, 166, 167.
Luxmore, C. M. See W. R. Dunstan.

M.

MacDonald, G. W., and O. Masson, a product of the action of nitric oxide on sodium ethylate, 944.
MacGregor, J. See P. F. Frankland.
McKillop, Mrs. See W. H. Pendlebury.
McLeod, H., note on the liberation of chlorine during the heating of potassic chlorate and manganic peroxide, 202.
Marchlewski, L. See E. Schunck.
Marsh, J. E., a sulphate of oxamide, Proc., **1894**, 58.
Marsh, J. E., and J. A. Gardner, researches on the terpenes. IV. phosphorus-derivatives of camphene, 35.
—— —— derivatives of camphene containing halogens, Proc., **1894**, 57.
Mason, A. T., and G. R. Winder, interaction of benzylamine and ethylic chloracetate, 187.
—— —— condensation products of benzylamine and several benzenoïd alkaloïds, 191.
Masson, O. See G. W. MacDonald.
Meldola, R., and E. S. Hanes, azo-compounds of the ortho series, 834.
—— —— notes on meta-azo-compounds, Proc., **1894**, 140.
Meldola, R., and F. Southerden, azoparacresol-derivatives, Proc., **1894**, 118.
Millar, J. H. See W. A. Tilden.

Mills, C., studies on the structure of azobenzene. The action of bromine on azobenzene: production of tetrabromobenzidine, 51.
Mitchell, C. A., analysis of water from the Zem-Zem well in Mecca, Proc., 1893, 245.
Murray, T. S. See F. R. Japp.

N.

Neville, F. H. See C. T. Heycock.

P.

Pears, A., jute fibre produced in England, 470.
Pendlebury, W. H., and Mrs. McKillop, the interaction of hydrogen chloride and potassium chlorate, Proc., 1893, 211.
Perkin, A. G., and F. Cope, derivatives of anthraquinone. Part III. 842.
Perkin, A. G., and J. J. Hummel, colouring and other principles contained in mang-koudu, 851.
—— —— the colouring principles of *Ventilago Madraspatana*, 923.
Perkin, W. H., sen., the magnetic rotation of hydrogen chloride in different solvents: and also of sodium chloride and chlorine, 20.
—— the magnetic rotations of some of the derivatives of fatty acids containing halogens, also of acetic and propionic acids, phosgene, and ethylic carbonate, 402.
—— the magnetic rotation of compounds supposed to contain acetyl, or to be of ketonic origin. Part II, 815.
Perkin, W. H., jun., the cis- and trans-modifications of 1 : 2-tetramethylenedicarboxylic acid and of 1 : 2-pentamethylenedicarboxylic acid, 572.
—— derivatives of tetramethylene, 950.
Perkin, W. H., jun., and G. Révay, synthesis of indene, hydrindene, and some of their derivatives, 228.
Perkin, W. H., jun. See also A. W. Crossley, W. Goodwin, and E. Haworth.
Pickering, S. U., examination of some recent freezing point determinations, 293.
Picton, H. See S. E. Linder.
Plimpton, R. T., and M. W. Travers, metallic derivatives of acetylene. I. Mercuric acetylide, 264.
Pope, W. J. See F. S. Kipping.

R.

Ramsay, W. See also Miss E. Aston.
Read, A. A., behaviour of the more stable oxides at high temperatures, 313.
Read, A. A. See also J. O. Arnold.
Révay, G. See W. H. Perkin, jun.
Richardson, A., action of light on oxalic acid, 450.
Rodger, J. W. See T. E. Thorpe.
Ruhemann, S., and F. E. Allhusen, formation of pyrroline-derivatives from aconitic acid, 9.

S.

Sakurai, J., constitution of glycocine and its derivatives, Proc., 1894, 90.
Schunck, E., and L. Marchlewski, notes on madder colouring matters, 182.
Sell, W. J., and T. H. Easterfield, studies on citrazinic acid, 828.
Sell, W. J. See also T. H. Easterfield.
Sims, W. E. See W. Holt.
Smith, C., the natural oxycelluloses, 472.
—— note on the estimation of furfural, 479.
Smith, E. A., notes on the cupellation of bismuth silver alloys, 624.
Smith, S. I., obituary notice of, 388.
Smithells, A., and F. Dent, the structure and chemistry of the cyanogen flame, 603.
Southerden, F. See R. Meldola.
Sudborough, J. J., chlorination of aniline, 1028.

T.

Thorpe, T. E., the mineral waters of Cheltenham, 772.
Thorpe, T. E., and J. W. Rodger, the supposed relation between the solubility of a gas and the viscosity of its solvent, 782.
Thudichum, J. L. W., the action of benzoic chloride on urine in presence of alkali: formation of benzoic de-

rivatives of urochrome, PROC., **1893**, 238.
Tilden, W. A., and M. O. Forster, action of nitrosyl chloride on unsaturated compounds, 324.
Tilden, W. A., and J. H. Millar, note on the action of nitrosyl chloride on amido-derivatives of benzenoïd hydrocarbons, PROC., **1894**, 59.
Titherley, A. W., sodium, potassium, and lithium amides, 504.
Travers, M. W. See R. T. Plimpton.
Truman, E. B., apparatus for the extraction for analysis of gases dissolved in water and other liquids, 43.
Tutton, A. E., connection between the atomic weight of contained metals and the crystallographical characters of isomorphous salts: a crystallographical study of the normal sulphates of potassium, rubidium, and cæsium, 628.
Tyndall, J., obituary notice of, 389.

V.

Veley, V. H., the inertness of quicklime. Part II, 1.

W.

Walker, J., the boiling points of homologous compounds. Part I. Simple and mixed ethers, 193.
—— the boiling points of homologous compounds. Part II, 725.
—— note on the constitution of glycocine, PROC., **1894**, 94.
Walsh, J. G., jun. See S. C. Hooker.
Wilson, E. See S. C. Hooker.
Winder, G. R. See A. T. Mason.

INDEX OF SUBJECTS.

TRANSACTIONS. 1894.

And also to such papers as appeared in the Proceedings during the Session 1893—1894 (Nos. 128—141; November, 1893, to July, 1894), but not in Transactions (marked PROC.).

A.

Acenaphthylene, action of nitrosyl chloride on, 327.
—— colour of, PROC., **1893**, 206.
—— constitution of, PROC., **1893**, 207.
Acetaldehyde, condensation of, with β-hydroxy.α-naphthaquinone, 82.
Acetaldoxime, action of acetic anhydride on the isomeric forms of, 213, 215.
—— action of phosphorus pentachloride on the isomeric forms of, 216, 218.
—— action of phosphorus trichloride on the isomeric forms of, 220.
—— isomeric forms of, 209.
Acetamide, action of phosphorus pentachloride on, 219.
Acetanilide, action of nitrosyl chloride on, PROC., **1894**, 60.
Acetic acid, brom-, magnetic rotation of, 406, 408, 425.
—— —— chlor-, magnetic rotation of, 403, 421.
—— —— dibrom-, magnetic rotation of, 406, 408, 425.
—— —— dichlor-, magnetic rotation of, 405, 414, 422.
—— —— magnetic rotation of, 405, 414, 421.
—— —— tribrom-, magnetic rotation of, 406, 426.
—— —— trichlor-, magnetic rotation of, 405, 414, 422.
Acetic anhydride, magnetic rotation of, 824.
Acetic chloride, action of, on silver nitrate, PROC., **1893**, 256.
Acetoformaldoxime, PROC., **1894**, 57.
Acetyl, magnetic rotation of compounds supposed to contain, 815.
Acetylacetone, magnetic rotation of a mixture of, with acetic anhydride, 824.
Acetyl-α-benzaldoxime, crystallisation of, PROC., **1893**, 255.
Acetylbenzenazo-*p*-cresol, *p*-chlor-, PROC., **1894**, 119.
Acetylbenzene-β-azo-α-naphthol, and its dibromo derivative, 840.
Acetylbenzoylaconine, 291.
Acetylene, metallic derivatives of, 264.
Acetylethylalizarin, 186.
Acetylmethylpurpuroxanthin, 184.
Acetyl-α-naphthalenazo-β-naphthol, 838.
Acetyl-β-naphthaleneazo-β-naphthol, 836.
Acetyl-*m*-nitrobenzeneazo-*p*-cresol, 838.
Acetylrubiadin, 184.
Acid, $C_4H_4O_6$, obtained by the oxidation of tartaric acid in presence of iron, 899.
Acid chlorides and nitrates, interaction of, PROC., **1893**, 255.
Acids, fatty, normal, boiling points of, 729.
—— —— —— boiling points of ethereal salts of, 725.
—— polybasic, affinities of, 1024.
Aconine, action of heat on, 181.
—— formula of, 292.
Aconite alkaloïds, 174, 176, 290.
Aconitic acid, formation of pyrroline derivatives from, 9.
Aconitine, action of iodine and methylic iodide on, PROC., **1894**, 96.
—— and some of its derivatives, effect of heat on, 176.
—— conversion of, into isaconitine, 290.
—— hydrolysis of, 290.

Aconitine, iodo-, Proc., **1894**, 97.
—— periodide, Proc., **1894**, 96.
—— salts, action of heat on, 181.
Adipic acid, homologues of, 995.
Aldehydes, benzenoïd, condensation products of, 191.
—— condensation of β-hydroxy-α-naphthaquinone, 76.
—— normal, boiling points of, 734.
Aldoximes, formation of, by the reduction of aliphatic nitro-compounds, Proc., **1894**, 139.
—— paraffinic, isomerism of the, 206.
Alizarin, monalkyl ethers of, 185.
Alizarin-β-carboxylic acid, 847.
—— —— nitro-, 848.
Alkali metals, oxidation of, 432.
Alkyl chlorides, boiling points of, 732.
Alkylamines, normal, boiling points of, 733.
Allocrotonic acid, action of nitrosyl chloride on, 328.
Alloys, behaviour of, in a voltaic circuit, 1031 : Proc., **1894**, 145.
—— electromotive force of, in a voltaic cell, 1031.
—— replacement of one metal by another in, 1038.
—— triple, freezing points of, 65.
Allylacetylacetone, magnetic rotation of, 817, 825.
—— refractive and dispersive power of, 819, 827.
Alumina, behaviour of, at high temperatures, 314.
—— phosphorescence of, in a vacuum, 737.
Aluminium-gold-tin alloys, freezing points of, 74.
Amidoazobenzene, metanitro-, Proc., **1894**, 141.
Amines, benzenoïd, action of nitrosyl chloride on, Proc., **1894**, 59.
Ammonia and hydrogen chloride, influence of moisture on the combination of, 614.
Ammonium chloride, influence of moisture on the action of lime on, 612.
—— —— influence of moisture on the dissociation of, 615.
—— hyponitrite, Proc., **1893**, 210.
—— oximidosulphonates, 558.
Amylenic nitrosochloride, 325.
Amylidenedihydroxynaphthaquinone, αβ-anhydride of, 84.
Anethoïl, action of nitrosyl chloride on, 330.
Anhydrobishydrindone, 495.
—— brom-, 497.
Anhydrodiglutaric acid, 831.
Aniline, action of nitrosyl chloride on, Proc., **1894**, 60.
—— chlorination of, 1028.
—— 2 : 4 : 6-trichloro-, 1028.
Anilines, substituted, action of nitrosyl chloride on, Proc., **1894**, 60.
Anniversary meeting, 336.
Anthraquinone, derivatives of, 842.
β-Anthraquinonecarboxylic acid, sulphonation of, 844.
Antimonic anhydride, behaviour of, at high temperatures, 314.
Antimony-lead alloys, E.M.F. of, in a galvanic call, 1035.
Antimony-tin alloys, E.M.F. of, in a voltaic cell, 1035.
Arsenious sulphide, solutions of, Proc., **1894**, 166.
Atomic weight of contained metals and the crystallographical characters of isomorphous salts, relation between, 628.
Azelaïc acid, synthesis of, 86, 92.
Azobenzene, action of bromine on, 51, 53; Proc., **1893**, 206.
—— conversion of, into tetrabromobenzidine, 54.
—— *m*-nitro-, Proc., **1894**, 143.
—— *m*-nitramido-, Proc., **1894**, 141.
—— *m*-nitro-*p*-iodo-, Proc., **1894**, 142.
—— perbromide, 54.
—— structure of, 51.
—— tetrabromo-, Proc., **1893**, 206.
m-Azo-compounds, Proc., **1894**, 140.
Azo-compounds of the ortho-series, 834.
Azo-*p*-cresol derivatives, Proc., **1894**, 118.

B.

Balance sheet of the Chemical Society, from March 16, 1893, till March 16, 1894, 380.
Balance sheet of the Research Fund, from March 16, 1893, till March 16, 1894, 381.
Barium carbonate, phosphorescence of, 736.
—— chloride freezing points of solutions of, 311.
—— oxide, behaviour of, at high temperatures, 314.
—— oximidosulphonates, 559.
—— potassium oximidosulphonates, 561.
—— sodium oximidosulphonates, 560.
Benzaldehyde, condensation of, with benzylamine, 191.
—— condensation of, with β-hydroxy-α-naphthaquinone, 79.

α-Benzaldoxime, action of alkyl haloïds on, PROC., **1893**, 255.
—— action of hydrogen chloride, bromide, and iodide on, PROC., **1893**, 254.
—— and its derivatives, properties of, PROC., **1893**, 253.
—— crystallisation of, PROC., **1893**, 253.
—— sulphate, PROC., **1893**, 255.
β-Benzaldoxime, dihydrofluoride, PROC., **1893**, 254.
—— sulphate, PROC., **1893**, 255.
Benzeneazo-*p*-cresol, bromo-*m*-nitro-, 839.
—— *p*-chloro-, PROC., **1894**, 118.
—— dibromo-, PROC., **1894**, 118.
—— ethyl ether, *m*-nitro-, 839.
—— *m*-nitro-, 838.
Benzeneazodimethylaniline, reduction of, 882.
Benzeneazo-α-naphthalene, *m*-nitro-, PROC., **1894**, 141.
Benzene-β-azo-α-naphthol, 839.
—— ethyl ether and its nitro-derivative, 841.
—— dinitro-, 840.
Benzeneazophenol, *m*-nitro-, PROC., **1894**, 143.
Benzidine, acetylation of, 55.
—— tetrabromo-, acetylation of, 55.
—— —— constitution of, 56.
—— —— conversion of azobenzene into, 54.
Benzile and benzylamine, interaction of, in presence of zinc chloride, PROC., **1894**, 49.
Benzoic acid, 2:4:6-trichloro-, preparation of, 1030.
Benzoic chloride, 2 : 4 : 6-trichloro-, 1030.
Benzoïn, preparation of 2′: 3′-diphenylindoles from, by the action of primary benzenoïd amines, 889.
Benzoylaconine, 291.
Benzoylformaldoxime, PROC., **1894**, 57.
Benzylamidoacetic acid, 189.
Benzylamine, and benzenoïd aldehydes, condensation products of, 191.
—— and benzile, interaction of, in presence of zinc chloride, PROC., **1894**, 49.
—— and ethylic chloracetate, interaction of, 187.
"*o*-Benzyleneindene," 494.
Benzylglycocine, 189.
Benzylidenebenzylamine, 191.
Benzylidenedihydroxynaphthaquinone, 79.
—— αβ-anhydride of, 81.
β-Benzylidene-α-hydrindone, 498.
—— dibromide, 499.
Benzyllophine, PROC., **1894**, 49.
Bismuth, freezing points of alloys of, in thallium, 32, 34.
—— oxide, behaviour of, at high temperatures, 314.
Bismuth-cadmium-gold alloys, freezing points of triple, 69.
Bismuth-cadmium-silver alloys, freezing points of, 73.
Bismuth-gold alloys, E.M.F. of, in a voltaic cell, 1034.
Bismuth-silver alloys, cupellation of, 624.
Bismuth-silver alloys, E.M.F. of, in a voltaic cell, 1034.
Bismuth-tin alloys, E.M.F. of, in a voltaic cell, 1034.
Bismuth-zinc alloys, E.M.F. of, in a voltaic cell, 1034.
Boiling points of ethereal salts of normal fatty acids, 725.
—— —— of homologous compounds, calculation of the, 193, 725.
—— —— of homologous simple and mixed ethers, 194.
Bromates, effect of heat on, 802.
Bromine, liquid, molecular weight of, 169.
Butane, 1 : 3-dibromo-, 962.
Butanetetracarboxylic acid, 1002.
—— —— homologues of, 995.
Butea frondosa, colouring matter of the flowers of, PROC., **1894**, 11.
Butyric acid, α-bromo-, magnetic rotation of, 410, 429.
—— —— ααβ-trichloro-, magnetic rotation of, 410, 423.

C.

Cadmium, oxide, behaviour of, at high temperatures, 314.
Cadmium-gold-bismuth alloys, freezing points of, 69.
Cadmium-gold-lead alloys, freezing points of, 66, 67.
Cadmium-gold-thallium alloys, freezing points of, 70.
Cadmium-lead alloys, E.M.F. of, in a voltaic cell, 1037.
Cadmium-silver-bismuth alloys, freezing points of, 73.
Cadmium-silver-lead alloys, freezing points of, 72.
Cadmium-silver-thallium alloys, freezing points of, 72.
Cadmium-silver-tin alloys, freezing points of, 71.
Cadmium-zinc alloys, E.M.F. of, in a voltaic cell, 1035.
Cæsium potassium and rubidium sulphates, comparative crystallography of, 628.

Cæsium potassium and rubidium sulphates, comparative optical characters of, 697.
—— —— —— —— volume relations of, 649.
—— sulphate crystallography of, 641.
—— —— optical properties of, 674.
Calcium oxide, action of chlorine on, 2.
—— —— and ammonium chloride, influence of moisture on the interaction of, 612.
—— —— and sulphuric anhydride, influence of moisture on the interaction of, 611.
—— —— behaviour of, at high temperatures, 314.
—— —— inertness of, 1.
—— —— phosphorescence of, 736.
—— oximidosulphonates, 565.
—— sulphide, phosphorescence of, 737.
Camphene, action of chlorine on, in presence of alcohol, Proc., **1894**, 58.
—— action of phosphorus pentachloride on, 35, 37.
—— bromo-, Proc., **1894**, 57.
—— chloro-, Proc., **1894**, 57.
—— halogen derivatives of, Proc., **1894**, 57.
—— phosphorus-derivatives of, 35.
α-Camphenephosphonic acid, 37.
β-Camphenephosphonic acid, 38.
Camphenephosphonic acids, action of halogens on the sodium salts of, 42.
—— —— action of heat on the sodium salts of, 41.
Camphor, action of bromine on, Proc., **1894**, 57.
—— dibromo-, a new, Proc., **1894**, 164.
—— preparation of sulphonic-derivatives of, Proc., **1894**, 163.
Camphoric acid, products of the action of fused potash on, Proc., **1894**, 65.
Camphorsulphonic bromide, Proc., **1894**, 164.
—— —— bromo-, Proc., **1894**, 164.
—— —— dextrorotatory, Proc., **1894**, 165.
—— chloride, dextrorotatory, Proc., **1894**, 164.
Caprylene, action of nitrosyl chloride on, 326.
Carbamide, freezing points of solutions of, 307, 308.
Carbon and iron, chemical relations of, 788.
—— bisulphide, combustion of, in oxygen, 616.
—— tetrabromide, new method of producing, 262.
Carbonic oxide, combination of, with chlorine under the influence of light, Proc., **1894**, 165.
Celluloses and oxycelluloses, atmospheric oxidations of, 476.
—— oxy-, deoxidation of, 478.
—— —— hydrolysis of, 478.
—— —— natural, 472.
Cerium dioxide, behaviour of, at high temperatures, 314.
Cheltenham, mineral waters of, 772.
Chemical change, influence of moisture on, 611.
Chlorine, action of, on lime, 2.
—— and hydrogen, influence of moisture on the interaction of, 612.
—— liberation of, during the heating a mixture of potassium chlorate and manganese peroxide, 202.
—— magnetic rotation of, 27.
Cinnamaldehyde, condensation of, with β-hydroxy-α-naphthaquinone, 85.
Cinnamene, ω-nitro-, action of nitrosyl chloride on, 327.
Cinnamic acid, action of nitrosyl chloride on, 329.
Citrazinamide, preparation of, from ethylic citrazinate, 29.
—— reduction of, with sodium amalgam, 29.
Citrazinic acid, 28, 828.
—— —— conversion of diammonium citrate into, 28.
—— —— dinitro-, 833.
—— —— nitration of, 831.
—— —— sulphonation of, 834.
Citrazinyl alcohol, 30.
Citrazinylhydrobenzoïn, 31.
Cobaltosocobaltic oxide, behaviour of, at high temperatures, 314.
Colour, the origin of, Proc., **1893**, 206.
Colouring principles of *Ventilago madraspatana*, 923.
Corydalic acid, 62.
Corydaline. Part III. 57.
—— distillation of, with zinc dust, 65.
—— oxidation of, with potassium permanganate, 57.
Corydalinic acid, 59.
—— —— action of hydrogen iodide on, 62.
Crotonic acid, action of nitrosyl chloride on, 328.
Crystallographical characters of isomorphous salts, connection between the atomic weight of contained metals and the, 628.
Cuminaldehyde, condensation of, with β-hydroxy-α-naphthaquinone, 85.
Cyanogen, flame, structure and chemistry of the, 603.

D.

Dehydracetic acid, salts of, 254.
Deviation, molecular, of ethereal salts of active diacetylglyceric acid, 750.
Diacetyladipic acids, 1016.
Diacetylbutanetetracarboxylic acid, 1014.
Diacetylglyceric acid, active, the maximum molecular deviation in the series of the ethereal salts of, 750.
—— —— influence of temperature on the rotatory power of ethereal salts of, 765.
Dibenzyladipic acids, 1021.
Dibenzylbutanetetracarboxylic acid, 1019.
Dibenzyl-$\alpha\gamma$-diacipiperazine, 190.
Dibenzyllophinium chloride, PROC., **1894**, 49.
Didymium, oxide, behaviour of, at high temperatures, 314.
Diethyladipic acids, 1009.
Diethylbutanetetracarboxylic acid, 1007.
$\alpha\alpha'$-Diglutaric acid, 830.
Dihydropentenecarboxylic acid, bromo-, 981.
Dihydropentenedicarboxylic acid, 983.
Dihydrotetrenecarboxylic acid, bromo-, 969.
Dihydrotetrenedicarboxylic acid, 975.
—— —— bromo-, 978.
—— anhydride, 977.
Dihydroxydiketopyridine, amido-, 833.
—— nitro-, 832.
$\omega\omega_2$-Dihydroxyhexane, 598.
Dihydroxymethylanthraquinone from mang-koudu, 863.
Dihydroxytetramethylenedicarboxylic acid, 972.
Dimethylacetylacetone, magnetic rotation of, 815, 824.
Dimethylacrylic acid, PROC., **1894**, 64.
Dimethyladipic acids, 1005.
Dimethylaniline, action of nitrosyl chloride on, PROC., **1894**, 60.
Dimethylbutanetetracarboxylic acid, 1004.
β_2-Dimethylglutaric acid, PROC., **1894**, 64.
—— anhydride, PROC., **1894**, 65.
Dimethylpropanetricarboxylic acid, PROC., **1894**, 65.
$\beta\beta$-Dinaphthyl, 877.
Dinaphthyldiquinone, 321.
Diphenylamine, action of nitrosyl chloride on, PROC., **1894**, 60.
2′ : 3′-Diphenylindole, preparation of, 892.
2′ : 3′-Diphenylindoles, preparation of, from benzoïn and primary benzenoïd amines, 889.
2′ : 3′-Diphenyl-α-naphthindole, 896.
—— compound of, with acetone, 897.
—— compound of, with diethyl ketone, 897.
—— compound of, with methyl ethyl ketone, 897.
2′ : 3′-Diphenyl-β-naphthindole, 897.
—— compound of, with acetone, 898.
2′ : 3′-Diphenyl-o-toluindole, 893.
—— compound of, with acetone, 895.
2′ : 3′-Diphenyl-p-toluindole, 896.
—— compound of, with acetone, 896.
Disodimide, non-existence of, 507.
Dissociation of ammonium chloride, influence of moisture on, 615.
—— of nitrogen tetroxide, influence of moisture on, 616.

E.

Elaïdic acid, action of nitrosyl chloride on, 329.
Electrical discharge, influence of moisture on, 621.
—— —— separation of mixed gases by, 619.
—— repulsion in solutions, PROC., **1894**, 167.
Electromotive force of alloys in a voltaic cell, 1030.
Elements, oxides of, and the periodic law, 107.
Emodin methyl ether, 925, 934.
—— —— —— nitro-, 934.
—— —— —— tetranitro-, 935.
—— tetranitro-, 925, 935.
Ethers, simple and mixed, boiling points of homologous, 193.
Ethoxypropane, chlor-, 596.
Ethylenic bromide, action of, on sodamide, 522.
Ethylic alcohol, freezing points of solutions of, 307, 308.
—— anhydroanilaconitate, 12.
—— benzylamidoacetate, 188.
—— bromacetate, magnetic rotation of, 406, 418, 427, 430.
—— α-bromobutyrate, magnetic rotation of, 410, 429.
—— α-bromopropionate, magnetic rotaof, 410, 429.
—— butanetetracarboxylate, preparation of, 578.
—— carbonate, magnetic rotation of, 405, 421.
—— chloracetate and benzylamine, interaction of, 187.

Ethylic chloracetate, magnetic rotation of, 406,414, 418, 423.
—— chlorocarbonate, magnetic rotation of, 405, 420.
—— α-chlorocrotonate, magnetic rotation of, 412, 424.
—— chloroformate, magnetic rotation of, 405, 420.
—— α-chloropropionate, magnetic rotation of, 409, 428.
—— dehydracetate, 261.
—— diacetylbutanetetracarboxylate, 1014.
—— dibenzylbutanetetracarboxylate, 1018.
—— dibromacetate, magnetic rotation of, 406, 418, 427, 430.
—— dibromotricarballylate, action of aniline on, 11.
—— —— action of baryta on, 10.
—— —— preparation of, 9.
—— dichloracetate, magnetic rotation of, 406, 414, 418, 423.
—— diethylacetoacetate, magnetic rotation of, 823, 827.
—— diethylbutanetetracarboxylate, 1007.
—— dimethylacetoacetate, magnetic rotation of, 816, 823, 827.
—— dimethylbutanetetracarboxylate, 1004.
—— dimethylpropanetricarboxylate, Proc., **1894**, 65.
—— —— magnetic rotation of, 821, 826.
—— —— refractive and dispersive power of, 823, 828.
—— ethylbutanetetracarboxylate, attempts to prepare, 1012.
—— ethylpimelate, 991.
—— heptane-$\omega_2\omega_2$-tetracarboxylate, 104.
—— —— synthesis of, 104.
—— iodacetate, magnetic rotation of, 408, 428, 431.
—— α-isobromobutyrate, magnetic rotation of, 412, 430.
—— octane-$\omega_2\omega_2$-tetracarboxylate, 600.
—— —— action of sodium ethoxide and iodine on, 601.
—— phenylpyrrolonedicarboxylate, 13.
—— salts of normal fatty acids, boiling points of, 726.
—— tribromacetate, magnetic rotation of, 406, 418, 428, 430.
—— trichloracetate, magnetic rotation of, 406, 414, 418, 423.
—— ααβ-trichlorobutyrate, magnetic rotation of, 410, 424.
—— trichlorolactate, magnetic rotation of, 409, 424.
Ethylidenedihydroxynaphthaquinone, 82.
—— αβ-anhydride of, 83.
Ethylmethylpimelic acid, 992.
Ethylpimelic acid, 989.
—— —— anilide of, 992.
Eugenol, action of nitrosyl chloride on, 331.
—— ethylic ether, action of nitrosyl chloride on, 331.
Evaporation, volatilisation of salts during, 445.

F.

Fermentative functions of yeast cells, specific character of, 911.
Ferric oxide, behaviour of, at high temperatures, 324.
Fluorine, density of, 401.
Fluorplumbates, 393.
Fluorplumbic acid, 399.
Formaldoxime, Proc., **1894**, 55.
—— bromide, Proc., **1894**, 56.
—— chloride, Proc., **1894**, 56.
—— iodide, Proc., **1894**, 56.
Formulæ, molecular, of some liquids, as determined by their molecular surface energy, 167.
Freezing point determinations, 293.
—— points of alloys in which the solvent is thallium, 31.
—— —— of dilute solutions, Proc., **1894**, 101.
—— —— of triple alloys, 65.
Furfural, estimation of, 479.

G.

Gas, supposed relation between the solubility of a, and the viscosity of its solvent, 782.
Gases dissolved in water, apparatus for the extraction for analysis of the, 43.
—— mixed, separation of, by the electric discharge, 619.
Germination, formation of oxycelluloses during, 476.
Glyceric acid, effect of temperature on the optical activity of ethereal salts of, 761.
Glycocine and its derivatives, constitution of, Proc., **1894**, 90, 94.
Gold, freezing points of solutions of, in thallium, 33.
Gold-aluminium-tin alloys, freezing points of, 74.

Gold-bismuth alloys, E.M.F. of, in a voltaic cell, 1034.
Gold-cadmium-bismuth alloys, freezing points of, 69.
Gold-cadmium-lead alloys, freezing points of, 66, 67.
Gold-cadmium-thallium alloys, freezing points of, 70.
Gold-lead alloys, E.M.F. of, in a voltaic cell, 1036.
Gold-silver alloys, E.M.F. of, in a voltaic cell, 1035.
Gold-tin alloys, E.M.F. of, in a voltaic cell, 1037.

H.

Heat, latent, of fusion of thallium, 35.
Heptabenzoylruberythric acid, 186.
p-Heptoyltoluene, PROC., **1894**, 60.
Heptylic chloride, action of aluminium chloride on, PROC., **1893**, 208; **1894**, 60.
Heptylic diacetylglycerate, active, 751.
Heptyl-*p*-toluidine, PROC., **1894**, 61.
Hexabenzoylruberythric acid, 187.
Hexahydrobenzoic acid, synthesis of, 86, 103; i, 366.
Hexamethylene glycol, 598.
Hexamethylenecarboxylic acid, synthesis of, 86, 103.
Hexamethylenic dibromide, 591, 599.
—— —— action of, on ethylic sodiomalonate, 591, 599.
—— —— action of sodium on, 591, 599.
Hexylene nitrosochloride, 326.
Homologous compounds, calculation of the boiling points of, 193, 725.
Hydracetylacetone, magnetic rotation of, 819, 825.
—— refractive and dispersive power of, 820, 828.
Hydrindene, action of bromine on, 250.
—— and some of its derivatives, synthesis of, 228.
—— ethyl ketone, 243.
—— —— ketoxime, 244.
—— methyl ketone, 140.
—— —— ketoxime, 241.
—— phenyl ketone, 245.
—— preparation of, 248.
Hydrindenecarboxylamide, 136.
Hydrindenecarboxylic acid, 233.
—— —— tetrabromo-, 237.
—— anilide, 136.
—— chloride, 235.
Hydrindenedicarboxylic acid, preparation of, 232.
Hydrindeneethylcarbinol, 244.
Hydrindeneethylcarbinyl acetate, 245.
Hydrindenemethylcarbinol, 242.
Hydrindenemethylcarbinyl acetate, 143.
a-Hydrindone and its derivatives, 480.
—— brom-, 500.
—— condensation products of, 495.
—— dibrom-, 501.
—— dichlor-, 503.
—— formation of the hydrocarbon truxene from, 269, 278.
—— isonitroso-, 492.
—— nitro-, 495.
—— preparation of, from phenylpropionic chloride, 484.
—— properties of, 488.
Hydrindonehydrazone, 493.
a-Hydrindoneoxime, 489.
—— conversion of, into hydrocarbostyril, 490.
Hydrocarbons, coloured, PROC., **1893**, 206.
Hydrocarbostyril, conversion of a *a*-hydrindoneoxime into, PROC., **1893**, 240.
Hydrogen and chlorine, influence of moisture on the interaction of, 612.
—— chloride and ammonia, influence of moisture on the combination of, 614.
—— —— and potassium chlorate, interaction of, PROC., **1893**, 211.
—— —— freezing points of solutions of, 308.
—— —— magnetic rotation of, in various solvents, 20.
—— peroxide, formation of, from oxalic acid, under the conjoint action of light and oxygen, 453.
Hydroquinoketopyridine, 830.
m-Hydroxyanthraquinone-*β*-carboxylic acid, 846.
Hydroxybenzaldehydes, condensation of, with benzylamine, 192.
o-Hydroxybenzylidenebenzylamine, 192.
p-Hydroxybenzylidenebenzylamine, 192.
Hydroxyhydrolapachol, brom-, 19.
—— hydroxime, 722.
Hydroxylamine, action of methylic iodide on, PROC., **1894**, 138.
Hydroxylamines, substituted, formation of, by the reduction of aliphatic nitro-compounds, PROC., **1894**, 139.
β-Hydroxy-*a*-naphthaquinone, condensation of aldehydes with, 76.
Hydroxytetramethylene, 960.
—— action of bromine on, 961.
Hyponitrites, PROC., **1893**, 210.
—— preparation of, PROC., **1893**, 210.

I.

Indene and some of its derivatives synthesis of, 228.
—— brom-, 253.
—— preparation of, from hydrindenecarboxylic acid, 246.
Indenecarboxylic acid, 138.
Indium oxide, behaviour of, at high temperatures, 314.
Iodates, effect of heat on, 802.
Iron, an early Scottish, 744.
—— and carbon, chemical relations of, 788.
Isaconitine, action of heat on, 181.
—— and picraconitine, identity of, 176.
—— conversion of aconitine into, 290.
Isobutyraldoxime, action of phosphorus pentachloride on, 226.
Isocrotonic acid, action of nitrosyl chloride on, 328.
Isosafrole, action of nitrosyl chloride on, 332.

J.

Jute fibre, produced in England, 470.

K.

α-Ketohydrindene, 488.
Ketone formed by the action of aluminium chloride on heptylic chloride, PROC., **1893**, 209.
Ketonic origin, magnetic rotation of compounds supposed to be of, 815.

L.

Lapachol, bromo-, preparation and properties of, 15.
—— hydroxime, 720.
—— synthesis of, PROC., **1893**, 259.
Lapachol-group, hydroximes of, 717.
α-Lapachone, n^x-bromo-, 18.
—— hydroxime, 723.
β-Lapachone, n^x-bromo-, 18.
—— hydroxime, 724.
Lead acetohydroxy oximidosulphonates, 569.
—— ammonium oximidosulphonates, 571.
—— freezing points of solutions of, in thallium, 32, 35.
—— oxide, behaviour of, at high temperatures, 314.
—— oximidosulphonates, 566.
Lead potassium oximidosulphonates, basic, 569.
—— sulphide, interaction of, with lead sulphate and oxide, PROC., **1894**, 151.
—— —— new volatile compounds of, PROC., **1894**, 113.
—— tetrafluoride, 399.
Lead-antimony alloys, E.M.F. of, in a voltaic cell, 1035.
Lead-cadmium alloys, E.M.F. of, in a voltaic cell, 1037.
Lead-cadmium-silver alloys, freezing point of, 72.
Lead-gold alloys, E.M.F. of, in a voltaic cell, 1036.
Lead-gold-cadmium alloys, freezing point of, 66, 67, 68.
Lead-silver alloys, E.M.F. of, in a voltaic cell, 1037.
Light, action of, on oxalic acid, 450.
—— combination of carbonic oxide with chlorine under the influence of, PROC., **1894**, 165.
Lime, action of chlorine on, 2.
—— and ammonium chloride, influence of moisture on the interaction of, 612.
—— and sulphuric anhydride, influence of moisture on the interaction of, 611.
—— inertness of, 1.
—— phosphorescence of, 736.
Liquids, molecular formulæ of some, as determined by their molecular surface energy, 167.
—— organic, influence of temperature on the optical activity of, 760.
Lithamide, preparation, properties, and composition of, 517.
Lithium chloride, magnetic rotation of, 26.
—— oxidation products of, 443.

M.

Madder colouring matters, 182.
Magnesium-silver couple, action of strong acids on, PROC., **1894**, 85.
Magnetic rotation of acetic and propionic acids, phosgene and ethylic carbonate, 402.
—— —— of chlorine, 27.
—— —— of compounds supposed to contain acetyl, or to be of ketonic origin, 815.
—— —— of halogen derivatives of the fatty acids, 402.
—— —— of hydrogen chloride in different solvents, 20.
—— —— of lithium chloride, 26.

Magnetic rotations of sodium chloride, 25.
Mang-koudu, colouring and other principles from, 851.
—— dyeing properties of, 868.
Manures, estimation of available phosphoric acid in, 162.
Mercuric acetylide, 265.
Mercury-β-dinaphthyl, 877.
Metals in contact with one another, action of concentrated acids on, Proc., **1894**, 84.
Methoxypropane, chlor-, 597.
Methoxypropylethylacetic acid, 993.
Methylaconitine, Proc., **1894**, 97.
Methylalizarin, 185.
Methylaniline, action of nitrosyl chloride on, Proc., **1894**, 60.
5-Methyl-4′-dimethylamidodiphenylmethane, 2-amido-, 883.
—— —— behaviour of, with benzile, 886.
—— —— behaviour of, with nitrous acid, 887.
—— —— behaviour of, with salicylaldehyde, 883.
—— —— decomposition of, with hydrochloric acid, 888.
Methylenediisonitrosamine, 949.
Methylic acetoacetate, magnetic rotation of, 816, 823, 826.
—— α-bromopentamethylenecarboxylate, 101.
—— chloracetate, magnetic rotation of, 408, 424.
—— dibromotetramethylenedicarboxylate, 967.
—— dihydrotetrenedicarboxylate, 974.
—— dimethylacetoacetate, magnetic rotation of, 816, 823, 826.
—— hydrindenecarboxylate, 234.
—— salts of normal fatty acids, boiling points of, 725.
—— *cis*-tetramethylenedicarboxylate, 583.
Methylpentylethylene, action of nitrosyl chloride on, 326.
Methylpropylethylene, action of nitrosyl chloride on, 325.
Molecular deviation, maximum, in the series of the ethereal salts of active diacetylglyceric acid, 750.
—— formulæ of some liquids as determined by their molecular surface energy, 167.
Molybdic anhydride, behaviour of, at high temperatures, 314.
Morindin from Mang-koudu, 867.
Morindone from Mang-koudu, 867.

N.

Naphthalene, β-bromo- and β-chloro-, action of, on benzene, in presence of aluminium chloride, 874.
—— β-chloro-, action of chlorobenzene and sodium on, 871.
—— —— preparation of, 875.
α-Naphthaleneazo-β-naphthol, 837.
β-Naphthaleneazo-β-naphthol, reduction of the acetyl-derivative of, 836.
β-Naphthaquinonehydrazone, 839.
α-Naphthol ethyl ether, trinitro-, 841.
—— trinitro-, 842.
β-Naphthol, action of, on benzene in presence of aluminium chloride, 874.
α-Naphthylamine, trinitro-, 841.
Naphthylhydrazines, action of nitrosyl chloride on, Proc., **1894**, 60.
Nickelic oxide, behaviour of, at high temperatures, 314.
Niobic anhydride, behaviour of, at high temperatures, 314.
Nitrates, action of acid chlorides on, Proc., **1893**, 255.
Nitric acid, freezing points of solutions of, 309.
—— —— molecular weight of liquid, 169.
Nitric oxide, action of, on potassium, 440.
—— —— action of, on sodium, 443.
—— —— action of, on sodium ethoxide, 944.
—— —— and oxygen, influence of moisture on the interaction of, 613.
Nitric peroxide, influence of moisture on the dissociation of, 616.
Nitro-compounds, aliphatic, reduction products of, Proc., **1894**, 139.
Nitrogen oxides, red, action of, on potassium, 440.
—— tetroxide, influence of moisture on the dissociation of, 616.
Nitrosyl chloride, action of, on unsaturated compounds, 324.
Nitrous oxide, action of, on potassium, 438.
—— —— action of, on sodium, 443.

O.

Octylene, normal, action of nitrosyl chloride on, 326.
Octylic diacetylglycerate, 752.
Oils, essential, aerial oxidation of, Proc., **1894**, 51.
Oleïc acid, action of nitrosyl chloride on, 329.

Omicholin, PROC., **1893**, 239.
Optical activity of organic liquids, influence of temperature on, 760.
Organic-compounds, viscous flow of, PROC., **1894**, 136.
Oxalic acid, action of light on, 450.
Oxamide, sulphate, PROC., **1894**, 58.
Oxides, behaviour of the more stable, at high temperatures, 313.
—— of the elements and the periodic law, 106.
—— stability of, considered in relation to the periodic law, 314.
Oximidosulphonates, 523.
—— and sulphazotates, identity of, 535.
—— behaviour of, when heated, 542.
—— constitution of, 535.
—— hydrolysis of, 541.
Oxycelluloses, atmospheric oxidations of, 476.
—— deoxidation of, 477.
—— hydrolysis of, 478.
—— natural, 472.
Oxygen and nitric oxide, influence of moisture on the interaction of, 613.
Ozone, influence of moisture on the formation of, from oxygen, 617.

P.

Paraffins, normal, boiling points of, 730.
Δ^1-Pentamethenylcarboxylic acid, 101.
Pentamethylenecarboxylic acid, anilide of, 100.
—— —— dibromo-, 102.
—— —— synthesis of, 86, 98.
—— —— $\alpha\beta_2$-tribromo-, 982.
—— chloride, 99.
Pentamethylenediamine hydrochloride, action of silver nitrite on, 94.
1 : 1-Pentamethylenedicarboxylic acid, 96.
1 : 2-Pentamethylenedicarboxylic acid, 978.
—— —— *cis*- and *trans*-modifications of, 572.
—— —— dibromo-, 980.
cis-Pentamethylenedicarboxylic acid, 590.
—— anhydride, 587.
—— phenylimide of, 589.
trans-Pentamethylenedicarboxylic acid, 586.
—— anhydride, 985.
Periodic law and the oxides of the elements, 106.
—— —— stability of the oxides considered in relation to the, 314.
Phenanthrene, action of nitrosyl chloride on, 327.
Phenazine from thymoquinonediorthonitranilide, PROC., **1893**, 216.
Phenol, freezing points of solutions of, 307.
—— liquid, molecular weight of, 168.
Phenylchloropropylenehydrindone, 486.
Phenylhydrazine, action of nitrosyl chloride on, PROC., **1894**, 60.
β-Phenylnaphthalene, 869.
—— synthesis of, 870.
Phenylnaphthalenes, 869.
Phenylpropionic acid, formation of the hydrocarbon truxene from, 269, 277.
—— chloride, preparation of, 484.
Phenylpyrrolonedicarboxylic acid, monamide of, 13.
Phosgene, magnetic rotation of, 404, 420.
Phosphorescence, observations on the nature of, 734.
Phosphoric acid, estimation of probably available, in manures, 162.
—— —— estimation of probably available, in soils, 115.
—— —— freezing points of solutions of, 308, 309.
Phosphorus, molecular weight of liquid, 172.
Picraconitine, 174.
—— and isaconitine, identity of, 176.
Pimelic acids, substituted, 987.
Piperidine, nitrol-, 325.
Plant food in soils, mineral, analytical determinations of probably available, 115.
Platinum, freezing point of solutions of, in thallium, 34.
Plumbates, fluor-, 393.
Plumbic acid, fluor-, 399.
Potash in soils, estimation of probably available, 115.
Potassamide, action of nitrosyl chloride on, 521.
—— action of, on inorganic oxides, 519.
—— preparation, properties, and composition of, 511.
Potassium, action of dry air or oxygen on, 434,
—— action of nitric oxide on, 440.
—— action of nitrous oxide on, 438.
—— action of the red oxides of nitrogen on, 440.
—— carbonate, freezing points of solutions of, 311.
—— chlorate and hydrochloric acid, interaction of, PROC., **1893**, 211.
—— —— and manganese dioxide, liberation of chlorine during the heating of a mixture of, 202.

Potassium chlorate, effect of heat on, 814.
—— —— influence of moisture on the decomposition of, 617.
—— chloride, freezing points of solutions of, 310.
—— fluoroxyperplumbate, 394.
—— fluorplumbate, 394.
—— hydroxide, freezing points of solutions of, 310.
—— iodate, effect of heat on, 806, 811.
—— iodide, decomposition of, on exposure to air and light, 804.
—— —— liberation of iodine from, by the action of weak acids, 804.
—— melting point of, 433.
—— nitride, non-existence of, 512.
—— oxidation products of, 432.
—— oximidosulphonate nitrate, 551.
—— —— preparation of, 524.
—— oximidosulphonates, 547.
—— rubidium and cæsium sulphates, comparative crystallography of, 628.
—— —— —— —— comparative optical characters of, 697.
—— —— —— —— volume relations of, 649.
—— sodium oximidosulphonate chloride, 551.
—— —— oximidosulphonates, 551.
—— sulphate, crystallography of, 634.
—— —— freezing points of solutions of, 311.
—— —— optical properties of, 666.
Propionaldoxime, action of phosphorus trichloride on, 225.
—— action of phosphorus pentachloride on the isomeric forms of, 224.
—— isomeric forms of, 221.
Propionic acid, α-bromo-, magnetic rotation of, 410, 429.
—— —— magnetic rotation of, 403, 421.
Propylethylacetic acid, bromo-, 993.
Propylic salts of normal fatty acids, boiling points of, 726.
Pseudosolution and solution. PROC., **1894**, 166, 167.
Purpurin-β-carboxylic acids, 848.
Pyraconine, composition and properties of, 180.
—— salts of, 180.
Pyraconitine, 177.
—— hydrolysis of, 179.
—— salts of, 178.
Pyrroline-derivatives, formation of, from aconitic acid, 9.

Q.

Quicklime, inertness of, 1.
Quinhydroketopyridine, reduction of, 828.
Quinone-derivatives, conversion of ortho- into para- and of para- into ortho-, 76, 321, 717.
Quinonedi-*m*-nitranilide, PROC., **1893**, 216.
Quinonedi-*p*-nitrotoluidide, PROC., **1893**, 216.
Quinone-*m*-homofluorindene, PROC., **1893**, 216.
Quinone-*m*-nitranilide, PROC., **1893**, 216.
Quinone-*p*-nitrotoluidide, PROC., **1893**, 216.
Quinones, interaction of, with *m*-nitraniline and nitro-*p*-toluidine, PROC., **1893**, 215.

R.

Root sap, experiments on the acidity of, 127.
Rotation, molecular, of ethereal salts of diacetylglyceric acid, 755.
Rotatory power of organic liquids, effect of temperature on, 760.
Ruberythric acid, benzoyl-derivatives of, 186.
Rubiadin, constitution of, 182.
Rubidium cæsium and potassium sulphates, comparative crystallography of, 628.
—— —— —— —— comparative optical characters of, 697.
—— —— —— —— volume relations of, 649.
—— sulphate, crystallography of, 638.
—— —— optical properties of, 680.

S.

Safrole, action of nitrosyl chloride on, 332.
Salicylaldehyde, condensation of, with β-hydroxy-α-naphthaquinone, 85.
Salts, coagulative power of, on arsenious sulphide solutions, PROC., **1894**, 166.
—— ethereal, of normal fatty acids, boiling points of, 725.
—— isomorphous, connection between the atomic weight of contained metals and the crystallographical characters of, 628.
—— solid, viscous flow of, PROC., **1894**, 136.
—— volatilisation of, during evaporation, 445.
Sebacic acid, synthesis of, 600.

Silver, freezing points of solutions of, in thallium, 33.
—— hyponitrite, PROC., **1893**, 210.
Silver-bismuth alloys, cupellation of, 624.
—— —— —— E.M.F. of, in a voltaic cell, 1034.
Silver-cadmium-bismuth alloys, freezing points of, 73.
Silver-cadmium-lead alloys, freezing points of, 72.
Silver-cadmium-thallium alloys, freezing points of, 72.
Silver-cadmium-tin alloys, freezing points of, 67, 71.
Silver-copper couple, action of strong acids on, PROC., **1894**, 84.
Silver-gold alloys, E.M.F. of, in a voltaic cell, 1035.
Silver-lead alloys, E.M.F. of, in a voltaic cell, 1037.
Silver-magnesium couple, action of strong acids on, PROC., **1894**, 85.
Sodamide, action of ethylenic bromide on, 522.
—— action of ethylic iodide on, 521.
—— action of nitrosyl chloride on, 521.
—— action of, on inorganic oxides, 519.
—— preparation, properties and composition of, 504.
Sodium, action of dry air or oxygen on, 441.
—— action of nitric oxide on, 443.
—— action of nitrous oxide on, 443.
—— action of strong sulphuric acid on, PROC., **1894**, 86.
—— carbonate, freezing points of solutions of, 311.
—— chloride, freezing points of solutions of, 306, 308, 309.
—— —— magnetic rotation of, 25.
—— ethoxide, action of nitric oxide on, 944.
—— hydroxide, freezing points of solutions of, 310.
—— hyponitrite, PROC., **1893**, 210.
—— influence of contact with another metal on the action of strong sulphuric acid on, PROC., **1894**, 86.
—— nitride, non-existence of, 507.
—— oxidation products of, 440.
—— oxide, action of ammonia on, 510.
—— oximidosulphonates, 546.
—— —— preparation of, 524.
Soils, determination of the probably available mineral plant food in, 115.
—— viscosity of, PROC., **1894**, 136.
Solubility of a gas, and the viscosity of its solvent, supposed relation between, 782.
Solution and pseudo-solution, PROC., **1894**, 166, 167.
Solutions, dilute, results of measurements of the freezing points of, PROC., **1894**, 101.
—— electrical repulsion in, PROC., **1894**, 167.
Stannic oxide, behaviour of, at high temperatures, 314.
Stilbene, action of nitrosyl chloride on, 327.
Strontium oxide, behaviour of, at high temperatures, 314.
—— oximidosulphonates, 565.
Sugar, cane-, freezing points of solutions of, 307, 308.
Sulphazotates, 523.
—— and oximidosulphonates, identity of, 535.
Sulphuric acid, freezing points of solutions of, 306, 308, 310.
—— —— molecular weight of liquid, 170.
—— anhydride and lime, influence of moisture on the interaction of, 611.

T.

Tantalic anhydride, behaviour of, at high temperatures, 314.
Tartaric acid, oxidation of, in presence of iron, 899.
Temperature, influence of, on the optical activity of organic liquids, 760.
Terpenes, 35.
—— aërial oxidation of, PROC., **1894**, 51.
Tesu, colouring matter of the Indian dye-stuff, PROC., **1894**, 11.
Tetramethylene, bromo-, 961.
—— chloro-, 953, 964.
—— derivatives of, 950.
—— iodo-, 964.
—— —— action of quinoline on, 965.
Tetramethyleneamine, 959.
Tetramethylenecarboxylamide, 957.
Tetramethylenecarboxylic acid, $\alpha\beta_2$-tribromo-, 973.
Tetramethylenedicarboxylamide, 584.
1 : 2-Tetramethylenedicarboxylic acid, *cis*- and *trans*-modifications of, 572.
cis-Tetramethylenedicarboxylic acid, 582.
—— —— dibromo, 965.
—— —— —— action of alkalis on, 969.
—— —— —— action of potassium iodide on, 978.
—— —— —— action of silver oxide on, 972.

trans-Tetramethylenedicarboxylic acid, 585.
—— —— phenylimide of, 584.
cis-Tetramethylenedicarboxylic anhydride, 581.
—— —— dibromo-, 968.
—— —— —— action of dimethylaniline on, 971.
—— —— —— action of quinoline on, 971.
1 : 1 : 2 : 2-Tetramethylenetetracarboxylic acid, 580.
Thallium, freezing point of alloys in which the solvent is, 31.
—— latent heat of fusion of, 35.
Thallium-cadmium-silver alloys, freezing points of, 72.
Thallium-gold-cadmium alloys, freezing points of, 70.
Thymoquinone-*o*-methylphenazine, Proc., **1893**, 216.
Thymoquinonedi-*o*-nitranilide, Proc., **1893**, 216.
Thymoquinonedi-*p*-nitrotoluidide, Proc., **1893**, 216.
Tin-aluminium-gold alloys, freezing points of, 74.
Tin-antimony alloys, E.M.F. of, in a voltaic cell, 1035.
Tin-bismuth alloys, E.M.F. of, in a voltaic cell, 1034.
Tin-cadmium-silver alloys, freezing points of, 71.
Tin-gold alloys, E.M.F. of, in a voltaic cell, 1037.
Titanic anhydride, behaviour of, at high temperatures, 314.
p-Tolueneazo-*p*-cresol, acetylation and reduction of, Proc., **1894**, 118.
p-Tolueneazodimethylaniline, preparation of, 880.
—— reduction of, 879.
Trihydroxy-*a*-methylanthranole, monomethyl ether of, 936.
Trihydroxymethylanthraquinone methyl ether, 862.
Trihydroxy-*a*-methylanthraquinone, monomtehyl ether of, 933.
Trimethylhydroxylamine and its salts, Proc., **1894**, 139.
Truxene, action of nitric acid on, 288.
—— action of nitrobenzene on, 286.
—— dibromo-, 287.
—— formation of, from phenylpropionic acid and from hydrindone, 269.
—— molecular weight of, 283.
—— oxidation of, 285.
Tungstic anhydride, behaviour of, at high temperatures, 314.
Turpentine, Russian, aërial oxidation of, Proc., **1894**, 52.

U.

Unsaturated compounds, action of nitrosyl chloride on, 324.
Uranic anhydride, behaviour of, at high temperatures, 314.
Urea, freezing points of solutions of, 307, 308.
Urine, action of benzoic chloride on, in presence of alkali, Proc., **1893**, 238.
Urochrome, formation of benzoic-derivatives of, Proc., **1893**, 238.
Uromelanin, Proc., **1893**, 239.
Uropittin, Proc., **1893**, 239.

V.

Vanadic anhydride, behaviour of, at high temperatures, 314.
Ventilagin, 940.
Ventilago madraspatana, colouring principles of, 923.
Viscosity of solids, Proc., **1894**, 136.
Voltaic cell, electromotive force of alloys in, 1031.

W.

Water, apparatus for the extraction for analysis of the gases dissolved in, 43.
—— from the Zem-Zem Well in Mecca, Proc., **1893**, 245.
—— vapour, theory of the influence of, on chemical action, 618.
Waters, mineral, of Cheltenham, 772.
Wax from mang koudu, 867.
—— from *Ventilago madraspatana*, 923.

Y.

Yeast-cells, specific character of the fermentative character of, 911.

Z.

Zinc chloride, freezing points of solutions of, 311.
—— oxide, behaviour of, at high temperatures, 314.
Zinc-bismuth alloys, E.M.F. of, in a voltaic cell, 1034.
Zinc-cadmium alloys, E.M.F. of, in a voltaic cell, 1035.
Zirconium dioxide, behaviour of, at high temperatures, 314.